

## About Electronics & ICT Academy at PDPM IIITDM Jabalpur

Ministry of Electronics and Information Technology, Government of India has instituted four Electronics and ICT Academies with one academy at PDPM IIITDM Jabalpur with the primary objective preparing manpower for two important missions - 'Digital India' and 'Make in India'. The Academy aims at the design and implementation of scalable training programmes in niche areas of electronics and ICT for the development of required knowledge base, skills and tools to unleash the talent of Indian population. The Academy at PDPM IIITDMJ will partner with IIITM Gwalior, MANIT Bhopal, and IIT Indore run high quality specialized courses for faculty, students and unemployed graduates. In addition, the Academy will conduct customized training programmes and research promotion workshops for corporate sector and educational institutions. The Academy is envisioned to become a central hub of activities on training, consultancy work and entrepreneurship programmes.

## About PDPM IIITDM Jabalpur

IIITDM Jabalpur was established in 2005 with a focus on education and research in IT enabled Design and Manufacturing. Since its inception, PDPM IIITDM Jabalpur has been playing a vital role in producing quality human resources for contribution in India's mission of inclusive and sustainable growth. The Institute offers under-graduate, post graduate and PhD programmes in Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering, Design, and PhD programmes in Mathematics and Physics. Under IIIT act, the Institute has been declared an Institute of National Importance in January 2015. The Institute campus is being developed on 250 acres of land close to Dumna Airport, Jabalpur. The Institute is 10 kms from the main railway station and 5.5 kms from Dumna airport, Jabalpur.

## Faculty Development Programme on Numerical Algorithms and Programming Using MATLAB

### Who should attend?

The program is open to faculty, research scholars and students from all the colleges and universities. Industry personnel working in the concerned/allied discipline may also apply.

### How to apply?

Online – The participants may visit the website [ict.iiitdmj.ac.in](http://ict.iiitdmj.ac.in) and fill up the application form by providing all the necessary details.

By Email – Scanned copy of the filled application form duly endorsed by the forwarding authority to be mailed at. Please also send/post your duly-filled application form endorsed by the forwarding authority along with the DD of the registration fee (add accommodation charges, if needed) in favour of 'IIITDMJ-E&ICT ACADEMY' payable at Jabalpur. Registration fee can be paid to account (A/C Name: IIITDMJ-E&ICT ACADEMY;

A/C No. 50302042708; Allahabad Bank, Mehgawan, IIITDM Branch, IFSC Code: ALLA0212433) by CASH/NET BANKING/NEFT. Please ensure that your complete application should reach to us by June 30, 2018. No Travelling Allowance will be paid by the Academy.

### Important Dates :

Last Date of Online Registration: June 30, 2018

Spot Registration also available if seats are available.

### Registration Fee :

Interested persons may register for the course.

Fee Rs. 1000/- (Course material + lunch inclusive)

Accommodation (if needed) :

Accommodations are available in the institute's Guest House and hostels guest rooms on payment basis.

### Course Coordinators

Dr. Prashant Kumar Jain

Contact: 0761-2794415, 9425800310;

Email: [pkjain@iiitdmj.ac.in](mailto:pkjain@iiitdmj.ac.in)

Dr. Pavan Kumar Kankar

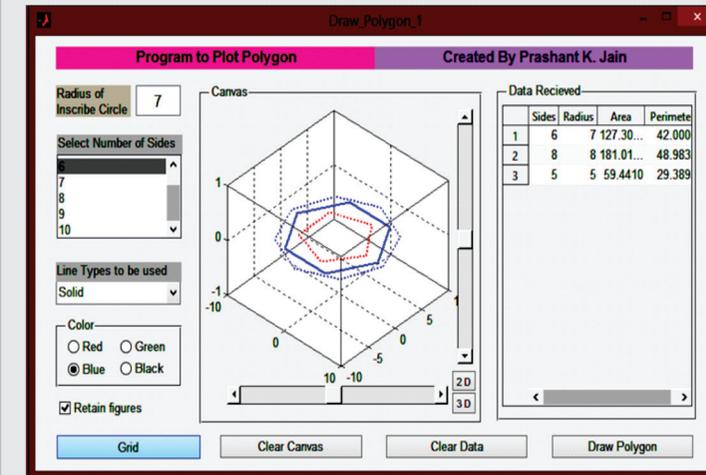
Contact: 0761-2794419, 9425807612;

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## Numerical Algorithms and Programming Using MATLAB

July 11-15, 2018

(Hands-on Experience Oriented Programming Skill Development Program)



## Faculty Development Programme Under Electronics and ICT Academy

An Initiative of  
Ministry of Electronics and Information Technology,  
Government of India

Electronics and ICT Academy  
PDPM Indian Institute of  
Information Technology, Design and  
Manufacturing, Jabalpur,  
Dumna Airport Road,  
Jabalpur 482005

Building  
Human  
Resources  
For  
Digital India

E&ICT Academy  
IIITDMJ

# Faculty Development Programme on Numerical Algorithms and Programming Using MATLAB

## Preamble

Now a days programming knowledge has become very essential for engineering professionals as well as scientists and researchers to develop simulation models, performing analysis, optimization & decision making. Knowledge of using modeling packages like AutoCAD, Pro/E, Solid Works, CATIA, MS-Excel etc. is not sufficient. Engineering professionals, scientists and researchers are also expected to know, how to control the package by programming and customizing it as per the requirement. Many times data exchange between different software packages has become necessity to utilize expertise of different software packages and requires a neutral software tool like MATLAB to take the input from software, perform computations and output the results to another software package. MATLAB is excellent tool for visualization and manipulation of engineering data as well as performing various engineering computations. Software modules can also be developed using GUI of MATLAB. It also provides various tool boxes to perform specialized computations. The workshop information brochure can be downloaded from <http://amec.iiitdmj.ac.in/index.html>

## Teaching Methodology

This course is designed for anyone wishing to develop a basic comprehension of programming and GUI development. This is an exciting time in the academia and industry where programming is the vital tool that fortifies research and development. It is hands-on experience oriented skill development program with extensive applications of computational methods and specific programming exercises. Course will be beneficial to beginners as well as practitioners of different domain. Teaching methodology will be adopted in such a manner that all can cope up even those who do not possess any prior knowledge of computational methods and programming. Case studies of advanced application of MATLAB will be presented by highly motivated researchers/faculty and they will also demonstrate applications of computational methods through their recent research works. Every participant will be allotted an individual PC for hands on practice during the sessions.

## Course Contents

Introduction to MATLAB User Interface, Basic Operations, Using MATLAB as Calculator, Handling Variables, Data Format, Expressions and Matrices, Conditional/logical Statement, Execution Control, Loops, Writing Functions, Data Input/Output in Various Format, 2D Plotting Visualization Using MATLAB, 3D Plots, Modifying plots using property editor, Automating Plots, Building Graphical User Interface (GUI) Basics, Polynomials, curve fitting and interpolations, Debugging and Troubleshooting programs, Development Tools and Programming Techniques, Building GUI's by own, Generating Executable Files and Stand-Alone Applications, Applications of Simulink, Symbolic Math, MATLAB Applications demonstration.

**Recent Features :** Numerical Methods, Simulink, Symbolic Math, Apps development through MATLAB, Projects/ Case studies Demonstration, Handling data in MS Excel, Report generation.

## Resource Persons

- Dr. Prabin K. Padhy, Associate Professor, PDPM IIITDM Jabalpur
- Dr. Prashant K. Jain, Associate Professor, PDPM IIITDM Jabalpur
- Dr. Pavan K. Kankar, Assistant Professor, PDPM IIITDM Jabalpur
- Dr. Sachin K. Jain, Assistant Professor, PDPM IIITDM Jabalpur

## Contact us

The Course Coordinator,  
Numerical Algorithms and Programming using MATLAB

Electronics and ICT Academy  
PDPM Indian Institute of Information Technology,  
Design and Manufacturing, Jabalpur,  
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[www.ict.iiitdmj.ac.in](http://www.ict.iiitdmj.ac.in)

## Application Form

Name of the Applicant (first, last): .....

Age : ..... Gender : Male/Female

Category : GEN/OBC/SC/ST .....

Designation : .....

Qualification : .....

Name and Address of the Organization/Institute/college:  
.....  
.....

City/town: ..... Email: .....

Alternate email (if any): .....

Phone Number: .....

Mobile Number: .....

Do you need accommodation? (Yes/No):

Do you have prior knowledge of Programming ? (Yes/No):

Do you have prior knowledge of MATLAB ? (Yes/No):

DD Number: ..... Date: .....

Issuing Bank: ..... payable at: .....

### Signature of the Applicant

I hereby agree to relieve Mr./ Ms./ Dr. ....

..... in case she/he is selected to attend the programme.

### Signature and Seal of the Forwarding Authority

Name .....

Designation .....